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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,457	02/23/2004	Edward Bullister		8231

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WESTON, MA 02493

EXAMINER

CHOW, DOON Y

ART UNIT PAPER NUMBER

2629

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,457

Applicant(s)

BULLISTER, EDWARD

Examiner

Dennis-Doon Chow

Art Unit

2677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Chiu et al. (5457453).

Regarding to claim 1, Chiu discloses portable collapsible keyboard for input of data into a computing device (col. 3, lines 28-32), said keyboard comprising: a) a first keyboard section having a top surface, a front surface and a rear surface, and a first plurality of keys having keytops facing upward from said top surface, said first plurality of keys arranged substantially adjacent to one another to form a substantially contiguous first array of keys, said keytops of said first array of keys forming a substantially planar first keytop surface (Fig. 1), b) a second keyboard section having a top surface, a front surface and a rear surface, and a second plurality of keys having keytops facing upward from said top surface, said second plurality of keys arranged substantially adjacent to one another to form a substantially contiguous second array of keys, said keytops of said second array of keys forming a substantially planar second

Art Unit: 2677

keytop surface (Fig. 1), c) a rear pivot mechanism (38 and 37, Fig. 1) for pivoting said second keyboard section with respect to said first keyboard section, said rear pivot mechanism connected to said first keyboard section adjacent to said rear surface and having an axis of rotation fixed with respect to said first keyboard section, d) a front pivot mechanism (35 and 36, Fig. 1) for pivoting said second keyboard section with respect to said first keyboard section, said front pivot mechanism connected to said first keyboard section adjacent to said front surface and having an axis of rotation fixed with respect to said first keyboard section, e) an elongate link (45, Fig. 4) of fixed length for spacing said first and said second keytop surfaces, said link pivotally connected at its first end to said front pivot mechanism, said link connected at its other end to said second keyboard section such that, when said keyboard is in an open configuration with said first and second keytop surfaces substantially parallel and facing the same direction, said link separates by a fixed distance the frontward portions of said first and said second keytop surfaces (see Figs. 1-2), f) wherein said keyboard is collapsible through a pivoting action from said open configuration to a closed configuration in which said first and second keytop surfaces are in a face-to-face relationship (see Figs. 1-2, 13).

Regarding to claim 2, said first and second pivot mechanisms inherently align any relative rotation of said second keyboard section with respect to said first keyboard section about an x-axis fixed with respect to said first keyboard section and resist any relative rotation about all other axes.

Regarding to claim 3, Chiu further discloses said second keyboard section rotates 180 degrees about said x-axis to collapse said keyboard from said open configuration to said closed configuration (see Figs.1-2 and 13).

Regarding to claim 7, Chiu further discloses said first and second pluralities of keys comprise substantially all of the keys from the respective right and left halves of a "QWERTY" keyboard (see Fig. 1).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu.

Regarding to claims 5-6, Chiu does not disclose the rear pivot mechanisms comprising a lug and axel. However, it is well known in the art use a lug having a thrust bearing surface and an axel having journal bearing surface in a pivot mechanism. Thus, it would have been obvious to one of ordinary skill in the art to use the lug and axel in Chiu rear pivot mechanism because this is how a conventional pivot mechanism is made.

Regarding to 8, Chiu does not disclose the elongate keys (15, Fig. 1) on both side of the first and second section are space keys. However, it would have been obvious to one of ordinary skill in the art to convert these keys into space keys because this is where a space key is located in a conventional keyboard.

Regarding to claim 9, see the above disclosures.

5. Claims 4, 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu in view of Crisan (5187644).

In additional to the above disclosures, Chiu further discloses attaching a computing device (14) to a keyboard section (col. 3, lines 28-32). However, Chiu does not explicitly disclose the computing device comprising a display.

Crisan, in the same display field, discloses attaching a display to a keyboard section.

In light of Crisan, it would have been obvious to one of ordinary skill in the art to attach a display to the first or second section of Chiu's keyboard so that the output of the computing device can be seen.

Conclusion

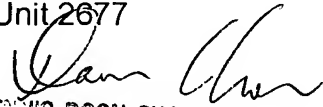
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis-Doon Chow whose telephone number is 571-272-7767. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Chow
March 18, 2006

Dennis-Doon Chow
Primary Examiner
Art Unit 2677


DENNIS-DOON CHOW
PRIMARY EXAMINER